

Arizona Mathematics Standard Performance Level Descriptors

High School

Exceeds the Standard – Students who score in this level illustrate a superior academic performance as evidenced by achievement that is substantially beyond the goal for all students. Students who perform at this level demonstrate a wealth of knowledge, skills, and abilities in fulfillment of the math standard. They can use combinations and permutations to solve problems, calculate surface area of 3-dimensional objects, and solve contextual problems using angle and side lengths of triangles.

Meets the Standard – Students who score in this level demonstrate a solid academic performance on subject matter as reflected by the math standard. Students who perform at this level are able to differentiate among subsets of the real numbers, solve a system of linear equations algebraically, and write the equation of a line using points, slope or the graph of the line. They can calculate volume of 3-dimensional objects, identify a valid conjecture, and determine probability in contextual situations.

Approaches the Standard – Students who score in this level show partial understanding of the knowledge and application of the skills that are fundamental for proficient work. Students who perform at this level show some understanding of the math standard's concepts and procedures by constructing and interpreting graphic displays, translating a contextual problem into algebraic terms, using properties of angles to solve problems, and recognizing and applying a simple iterative or recursive pattern. Some gaps in knowledge and skills are evident and may require additional instruction and remediation in order to achieve a satisfactory level of understanding.

Falls Far Below the Standard – Students who score in this level may have significant gaps and limited knowledge and skills that are necessary to satisfactorily meet the state's math standard. Students will usually require a considerable amount of additional instruction and remediation in order to achieve a satisfactory level of understanding.

Students at the “Exceeds the Standard” level generally know the skills required at the “Meets” and “Approaches” levels and are able to:	Students at the “Meets the Standard” level generally know the skills required at the “Approaches” level and are able to:	Students at the “Approaches the Standard” level generally know and are able to:
<ul style="list-style-type: none"> Identify and apply properties of real numbers. Use combinations and permutations to solve problems. Distinguish between independent and dependent events. Determine relationships between lines. Solve formulas for specified variables. Solve contextual problems using angle and side lengths of triangles. Calculate surface area of 3-dimensional objects. Determine whether a given procedure for solving an inequality is valid. 	<ul style="list-style-type: none"> Determine whether the solution to a problem is reasonable. Differentiate among subsets of the real numbers. Find probability in contextual situations. Apply the counting principle. Solve a system of linear equations algebraically. Determine slope, x-intercept and y-intercept of a linear equation. Write the equation of a line using points, slope or the graph of the line. Solve a linear inequality in one variable. Perform transformations on a plane figure. Determine elements of line segments (midpoint, distance). Calculate volume of 3-dimensional objects. Identify a valid conjecture. Write an appropriate conjecture in a contextual situation. 	<ul style="list-style-type: none"> Solve word problems. Simplify numerical expressions. Find probability using visual clues. Construct and interpret graphic displays. Make simple predictions from data. Determine possible outcomes. Simplify algebraic expressions. Translate a contextual problem into algebraic terms. Write the equation of a line, given a table of values. Solve linear equations. Recognize and apply a simple iterative or recursive pattern. Perform simple matrix operations. Determine the solution of a system of equations from a graph. Identify attributes of 2- and 3-dimensional objects. Solve problems involving similar figures and proportionality. Use properties of angles to solve problems. Identify simple transformations. Determine the purpose of a simple mathematical algorithm. Apply basic rules of logic to arguments.

These descriptors do not include all the skills and knowledge as contained in the Math Standard.